



Coastal Protection and Restoration Authority

Working to establish a safe and sustainable coast for our communities, the nation's critical energy infrastructure and to save our bountiful natural resources for generations to come

Terrebonne Basin Barrier Island & Beach Nourishment (TE-0143)

BACKGROUND

This project includes engineering, design, and construction of beach, dune, and marsh habitat within the Terrebonne Basin barrier island system with restoration work on West Belle Headland, Timbalier Island, and Trinity-East Island. The project will create and/or nourish approximately 1,011¹ acres of barrier island habitat and 7.5 miles of beach using approximately 11.5 million cubic yards of sediment. This includes restoration of over seven miles of shoreline. Sand for the restoration is being dredged from an offshore area known as Ship Shoal through a lease agreement with the Bureau of Ocean Energy Management (BOEM). The project is funded through the National Fish and Wildlife Foundation's (NFWF) Gulf Environmental Benefit Fund utilizing fines and penalties from the Deepwater Horizon disaster.

The restoration areas are located in Lafourche and Terrebonne Parishes, Louisiana and are part of the Terrebonne Basin. The Terrebonne Basin consists of four (4) contiguous water bodies, from west to east: Caillou Bay, Lake Pelto, Terrebonne Bay, and Timbalier Bay, which are separated from the open Gulf of Mexico by a series of barrier islands. Trinity-East and Timbalier Islands are located in the western central area of the Terrebonne Basin. West Belle Headland is located on the far eastern side of the Terrebonne Basin.

PURPOSE

The goal of the project is to reinforce the barrier islands to restore geomorphic and ecological form and function in order to: prevent breaching; protect and sustain unique foraging and nesting areas for threatened, endangered and protected migratory species; and protect critical infrastructure including Port Fourchon and Highway 1. Restoration of the Terrebonne Basin barrier islands will provide a buffer to reduce the full force and effects of wave action, saltwater intrusion, storm surge and tidal currents on associated estuaries and wetlands.

¹ Acreages are based on dune, supratidal, and intertidal habitats measured above 0.0 ft NAVD88.

COST

Total Project Cost (including E&D, construction, and 5 years of monitoring): \$170 million.

RESTORATION STRATEGY

TRINITY-EAST ISLAND

The template includes a 1,000-foot wide beach on the west end of the island as well as filling of a historic canal on the east side of the island (California Canal). This portion of the project will restore approximately 253 acres and 2.5 miles of beach habitat.

TIMBALIER ISLAND

The restoration template extends along the eastern portion of the island and includes the construction of an approximately 1,000-ft wide beach for a total of approximately 238 acres and 1.7 miles of beach.

WEST BELLE HEADLAND

The design includes extending and renourishing the original West Belle Pass Barrier Headland Restoration (TE-0052) project. A sand spit extending from the fill limits of the original TE-0052 was used as a platform to construct the recommended design template, following the natural shoreline geometry for alignment. The original restoration template included approximately 545 acres of beach, dune, and marsh components and 3.1 miles of beach.

The constructed template was heavily damaged in October 2020 by Hurricane Zeta. Prior to Hurricane Zeta's landfall, 442 acres of beach, dune and marsh habitat and 2.4 miles of beach had been constructed. After the storm, the work plan was revised to construct a feeder beach near West Belle Pass, which includes 79-acres and 1 mile of beach. The new feeder beach provides high quality nesting habitat, helps protect West Belle Pass from flanking, and provides a sediment source to nourish West Belle Headland.

PROJECT SCHEDULE

- Construction Contract Awarded to Weeks Marine, Inc.: August 14, 2019
- NTP for Construction: October 3, 2019
- Mobilization began mid-February 2020.
- Dredge and fill activities at W. Belle Headland
 - Start: May 2020
 - Finish: January 2022
- Dredge and fill activities at Trinity-East Island
 - Start: December 2020
 - Finish: November 2021
- Dredge and fill activities at Timbalier Island
 - Start: July 2021
- Project completion scheduled: May 2022

